

When to use LOCAD?

The technologies being tested and developed by the LOCAD project are intended to address the following examples:

- Cleanliness
 - Routine determination of microbial load on surfaces
- Quality of medical water used for injection
 - Verification of endotoxin-free water
- Quality of potable water
 - Routine determination of microbial load in potable water sources
- Quantification of live cells on a surface/in liquids*
- Detection/identification of ~10 microbial species on surfaces/in water*
- Pre-processing of samples/detection/identification of ~100 microbial species on surfaces/in liquids/in regolith or dirt*
- Rapidly monitoring the possibility of forward contaminating exploration sites*
- In situ detection of life marker molecules on future manned/unmanned exploration missions*
- Rapid assessment of crew health/determination of causative agent of illness*

The above examples are not the exclusive uses for these diverse technologies that utilize cutting-edge scientific techniques such as [microarrays](#) and [microfluidics](#) to rapidly provide answers for NASA crew members on ISS and future exploration missions. These technologies have been or will be tested in [multiple environments](#).

* Future technology capabilities